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Changaris

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(54) CONJUGATED FATTY ACID BASED EMULSION AND METHODS FOR PREPARING AND USING SAME

(76) Inventor: David G. Changaris, Louisville, KY

(US)

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This patent is subject to a terminal dis-

claimer.

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(56) References Cited

U.S. PATENT DOCUMENTS

3,872,038 A *	3/1975	Adams et al 523/336
3,950,547 A *	4/1976	Lamar et al 426/74
5,637,324 A *	6/1997	Bland 424/655
6,440,931 B1*	8/2002	Remmereit et al 514/3
7,074,418 B2*	7/2006	Changaris 424/400
2002/0002136 A1*	1/2002	Hebert 514/18

FOREIGN PATENT DOCUMENTS

WO WO 0067596 A1 * 11/2000

* cited by examiner

Primary Examiner — Yong S Chong Assistant Examiner — Jody L Karol (74) Attorney, Agent, or Firm — Charles G. Lamb; John F. Salazar; Middleton Reutlinger

(57) ABSTRACT

Stable emulsions comprising as a base one or more diene conjugated fatty acids. Amino acids and other macromolecules can be used to stabilize the emulsion. The emulsion is also useful as a carrier and delivery vehicle of the macromolecules to humans or animals in need of the macromolecules. Plant oil extracts, such as conjugated linoleic acid and its acylated derivatives, are useful as the diene conjugated fatty acids that form the base of the stable emulsion. The emulsions formed are useful as nutritional or cosmetic adjuvant for oral based nutrition, skin diseases, cosmetic utility, enhancing oral nutrition, or pharmacological benefit. Methods of producing and using the emulsions are also provided.

26 Claims, No Drawings